DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Determination That the Bonytail Chub (Gila elegans) Is an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines that the bonytail chub (*Gila elegans*) is an Endangered species. This fish has been extirpated from most of its range in the Colorado River Basin due to habitat alteration. Historically, the bonytail chub was found in large rivers of the Colorado River Basin in Wyoming, Utah, Colorado, Arizona, Nevada and California. Recent evidence indicates that there are no viable populations in the upper Colorado River Basin and in the lower Colorado River it occurs only in an impoundment, Lake Mohave, on the Arizona-Nevada state boundary. The population of bonytail chubs in this reservoir is comprised of elderly adults with no evidence of reproduction. These fishes have been observed spawning in the shallow areas but apparently without success. No Critical Habitat is being proposed since no known area in the Colorado River presently fulfills all the requirements for successful reproduction. The present action will afford this species the conservation and protective measures provided by the Endangered Species Act.

DATE: This rule takes effect on May 23, 1980.

FOR FURTHER INFORMATION CONTACT: Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240, 703/235-2771.

SUPPLEMENTARY INFORMATION:

Background

The bonytail chub was once found throughout the Colorado River basin in the larger turbid rivers. In the past it was collected from the Green River in Wyoming and Utah, Yampa and Gunnison Rivers in Colorado, Colorado River in Arizona, Nevada and California and the Gila and Salt Rivers in Arizona. In these rivers it was most frequently associated with eddies adjacent to swift water. The most recent surveys of streams and reservoirs in the Colorado River basin indicate that it is presently found only in Lake Mohave along the Arizona and Nevada border. The populations within this reservoir consist of old individuals with no signs of reproduction. In the past a few individuals have been taken in some of the other reservoirs in the lower Colorado River Basin but none have been found in fishery surveys in recent years. Decline in the population of bonytail chubs in the upper Colorado River Basin was noticed during the 1960's and continued through the 1970's. There is no evidence of bonytail chub reproduction anywhere in the Colorado River basin in recent years. Biologists working with the bonytail chub and other Endangered fishes of the Colorado River Basin, believe the physical and chemical alteration of their habitat and introduction of exotic fishes are the major factors that prevent successful reproduction and threaten their existence. The Colorado River Fishes Recovery Team at its December 1979 meeting noted that "very few bonytails have been observed recently and *no* reproduction has been documented *anywhere* in its range." Biologists working with endangered fishes in the Colorado River believe the bonytail is in immediate danger of extinction.

The taxonomic status of the bonytail chub has been confused by various workers in recent years. It has been treated as a full species by some, while others have considered it a subspecies of the roundtail chub (*Gila robusta*). A recent publication by Drs. Gerald R. Smith, Robert R. Miller and Daniel Sable on the "Species relationships among fishes of the genus *Gila* in the Upper Colorado River Drainage" in Volume I, Scientific Research in the National Parks (1979) examine the *Gila robusta* complex. Their findings indicate that the roundtail chub (*Gila robusta*), bonytail chub (*Gila elegans*) and humpback chub (*Gila cypha*) are all distinct species.

The bonytail chub was proposed as Endangered in the **Federal Register** (43 FR 17375-17377) on April 24, 1978. That proposed rule presented evidence indicating that the bonytail chub was an Endangered Species pursuant to the Endangered Species Act of 1973 as amended (16 USC 1531 et seq.). The proposal summarized the factors thought to be contributing to the Endangered status, specified the prohibitions which would be applicable if such a determination were made, and solicited comments and factual information from interested persons. A letter was sent to the Governors of the States of the Colorado River Basin where the bonytail chub had been reported in recent years notifying them of the proposed rulemaking. Comments from the States, Federal Agencies and other interested parties are summarized below.

Summary of Comments and Recommendations

Section 4(b)(1)(c) of the Act requires that a summary of all comments and recommendations received be published in the **Federal Register** prior to adding any species to the List of Endangered and Threatened Wildlife. The April 24, 1978, **Federal Register** proposed rule (43 FR 17375-17377) to list this species as Endangered invited all interested parties to submit factual reports or information which might contribute to the formulation of a final rule. All public comments submitted between April 24, 1978 and April 15, 1980, were considered.

A total of sixteen written responses were received by the Service relating to this proposal. Two of these responses were from Federal Agencies, seven were from State agencies and seven were from other interested organizations. Of the comments six were in support of the proposed rulemaking, five were opposed, two asked that the proposal be held in abeyance and the remaining three expressed no position with regard to the proposed action.

Those who favored the proposed action did so on the basis of their understanding of the impact of alterations to the environment and former range of the bonytail chub with concomitant reductions in population numbers. Those who opposed the proposed action expressed two basic points of concern: foremost was their concern that the proposed action would adversely affect their present and future opportunities to develop and use water for hydroelectric generation, industrial processing with particular reference to shale oil development, export for consumptive uses outside the Basin, and for agriculture. The second concern dealt with their perception of the Service's evaluation of the biological data and the Service's prior role in manipulating the Basin's aquatic biota. Several respondents were concerned about the adequacy of the data in terms of quantity and in terms of quality with regard to the taxonomic status of the bonytail chub. As discussed above recent studies have validated the specific status of the bonytail chub. All suggested that competition with exotic species (species not native to the Basin) was a major factor in the bonytail chub decline and questioned the Service's role in major rough fish eradication efforts in the upper Basin prior to the closure of Flaming Gorge Reservoir. Long-term Service efforts to establish and maintain exotic species in the Basin for recreational fishing was also questioned.

No new quantitative data was submitted by any of the respondents; however, several qualitative statements were included.

In discussing the proposed rulemaking, the Bureau of Reclamation (now called Water and Power Resources Service) acknowledged that long-term physical changes in the Green River had been maintained by Flaming Gorge Reservoir, although the Bureau disagreed with the Service statement that minor changes in water quality would cause a decline in the bonytail chub population. The Bureau noted that some physical factors, such as temperature, can and will be changed in the future. The U.S. Forest Service commented that in Ashley National Forest, the Green River temperatures had been reduced since the construction of Flaming Gorge Dam levels that were unsuitable for bonytail chub. The Forest Service referred to penstock modification at Flaming Gorge Dam, which would allow the release of warmer water.

New Mexico Department of Fish and Game indicated that the historical distribution of bonytail chub in New Mexico was based on the incorrect identification of roundtail chubs by earlier collectors. The Service agrees that there are no verified records of bonytail chubs in New Mexico. Arizona Game and Fish Department records indicated that recent observations or collections have occurred only in Lake Mohave and the riverine habitat below Davis Dam (which forms Lake Mohave) to upper Havasu. A survey report (1979) from the Arizona Cooperative Fishery Unit on the "Effects of Water Development on the lower Colorado River" indicated that no chubs were present in Lake Havasu. All specimens reported or observed by Arizona were large size class individuals inferring a senile population with no successful reproduction. However, Arizona expressed strong reservations against any proposal which might adversely affect the recreational fishery of the Colorado River and its reservoirs. California Department of Fish and Game reported that the bonytail chub has not been encountered during any department biological surveys over the past several years. Nevada Department of Fish and Game reported that the State felt there was justification to add the bonytail chub to the list as they (bonytail chub) are very seldom seen in Lake Mohave and to Nevada's knowledge, have not been seen in Lake Mead for many years. The State concluded that the status of bonytail chub in Nevada is not likely to improve, due to extensive habitat alteration. The State of Utah, responding through the Utah Environmental Coordinating Committee, opposed the proposed rulemaking on the basis that the data was insufficient to justify listing. The report urged that section 7 of the Act be amended to "allow some balance in the absolute requirement to protect unknown and/or less-beneficial species against the needs of people to store and conserve water for their own beneficial use which existing water compacts and treaties already allow."

Tosco Corporation of Vernal, Utah compared U.S. Geological Survey water quality data taken at Jensen, Utah, during the period of 1946–1958 to data collected at the same location between 1967–1974. The company reported "no significant differences" for sixteen water quality parameters when post-Flaming Gorge Dam water was compared to pre-dam water. No analysis of the data was provided.

White River Shale Project of Vernal, Utah conducted an extensive two-year fishery evaluation program on the White River, Utah. No bonytail chubs were among the 1,600 specimens collected.

The Dolores Water Conservancy District of Cortez, Colorado indicated that the Dolores River is now dry for a large part of the growing season. The Dolores Project would, among other things, establish minimum guaranteed flows below the McPhee Dam. These flows would increase the water flowing into the Colorado River system during the summer and early fall.

The Salt River Project of Phoenix, Arizona responded with a list of areas it felt should not be considered as Critical Habitat:

1. "The Salt River below Granite Reef Dam once supported large populations of these fish, but is now normally dry.

2. The lower portions of the Salt River above Granite Reef Dam has been dammed by SRP/Bureau of Reclamation to the extent that the native populations of these fish probably ceased reproduction and appear extinct there.

3. The upper portion of the Salt River (above Roosevelt Dam), the White River, the Black River, and their tributaries, are probably too cold for reproduction of these fishes, and apparently never were found there in numbers.

4. The Verde River once had populations of these fishes, but they appear to be extinct there now. The above items demonstrate that due to manmade structures and natural conditions, no portions of the Salt and Verde Rivers are suitable for designation as "Critical Habitat" for these species as provided by regulation.

The Colorado River Water Conservation District stated its assumption that any designation of the species status or Critical Habitat would not apply to Colorado since the Governor of Colorado was not requested to comment or make recommendations. Based on that assumption the District stated that the table on page 17377 of the referenced **Federal Register** should be corrected to show as to bonytail chub under "Portion of Range Endangered"—"Entire—except Colorado." The District summarizes its discussion by stating that it seems clear that inadequate evidence exists at present to justify the listing of any of the four endemic Colorado species (Colorado River squawfish, *Ptychocheilus lucius;* humpback chub, *Gila cypha;* razorback sucker, *Xyrauchen texanus;* and bonytail chub, *Gila elegans*) especially in view of the consequences of such listing. No quantitative or distributional data were provided.

After a thorough review and consideration of all the information available, the Director has determined that *Gila elegans* is endangered with becoming extinct throughout all of its range due to one or more factors described in Section 4(a) of the Act, as outlined in the proposed rulemaking:

These factors and their application to *Gila elegans* are as follows:

1. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Historically, the bonytail chub (*Gila elegans*) was found throughout the large turbid mainstream rivers of the Colorado River basin. This habitat alternated between swift water canyons characterized by torrential rapids and slow, meandering, sand-bottomed stretches. Within the large turbid mainstream rivers, the chub's habitat preference appears to be eddies adjacent to fairly swift current.

The Colorado River has been greatly altered by impoundments and diversions, both mainstream and tributary, eliminating much of the bonytail's original habitat. The lower Colorado River basin is presently an alternating series of reservoirs and cold tailwaters. In the past large adult bonytails have been found in Lakes Mead, Mohave, and Havasau and spawning has been observed, but no young have been found. At present Lake Mohave is the only reservoir known to support a population of adult bonytails. Therefore, present populations in this reservoir will probably disappear as the fish senesce and die. Cold tailwaters do not offer the warm (approximately 65° F) temperature needed for the bonytails to spawn, thus utilization of this artificial habitat appears non-existent. Portions of the lower Colorado basin, primarily the Gila River system, have been dewatered by irrigation projects. Hence bonytail habitat was lost and populations

extirpated by loss of in-stream flows. Decline in chubs due to inter-specific competition with introduced species of fish is another probable factor in the decline of the bonytail. Exotic species now outnumber native species in the Colorado basin.

The most dramatic decline has occurred in the Green River of Dinosaur National Monument during the 1960's. This portion of the river was drastically altered by the 1962 closure of the Flaming Gorge Dam. The decline in bonytails apparently started after 1966 when the reservoir became stabilized near its planned capacity. No reproduction has been noted in the last ten years for the bonytail, although biologists have looked specifically for young bonytails. The most recent (1974) collection of adult bonytails is from Desolation Canyon of the Green River, Utah. However, fish collections taken during the past 2 years from this area, as well as other sections of upper Colorado River basin streams which formerly supported populations did not yield any evidence of a viable population of bonytail chubs. At present the only known bonytail chub population is in Lake Mohave along the Arizona-Nevada border.

2. *Overutilization for commercial, sporting, scientific, or educational purposes.* Not applicable.

3. *Disease or predation.* Predation by introduced species is likely to have been an important factor in the decline of the bonytail chub. Loss of young fish to introduced predators such as bass, sunfish, and catfish is probable, although these species are not abundant in the upper basin. Predation on larval chubs by the red shiner (*Notropis lutrensis*) and redside shiner (*Richardsonius balteatus*) has been suggested by several authorities as probable. The extent of the problem is not known, but it may be considerable in some areas.

4. *The inadequacy of existing regulatory mechanisms.* Not applicable.

5. *Other natural or manmade factors affecting its continued existence.* Not applicable.

Effect of the Rulemaking

Section 7(a) of the Act, as amended, provides:

(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section." * * *

Provisions for Interagency Cooperation were published on January 4, 1978, in the Federal Register (43 FR 870–876) and codified at 50 CFR Part 402. These regulations are intended to assist Federal agencies in complying with Section 7(a) of this Act. This rulemaking requires Federal agencies to satisfy these statutory and regulatory obligations with respect to this species. There are no federal actions known at present which would be affected by this rule. Endangered Species regulations already published in Title 50 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered species. All of those prohibitions and exceptions also apply to any Threatened species, unless a special rule pertaining to that Threatened species has been published and indicates otherwise. The regulations referred to above, which pertain to Endangered and Threatened species, are found at Sections 17.21 and 17.31 of Title 50, and are summarized below.

With respect to the bonytail chub (*Gila elegans*), all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR 17.21, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export or ship in interstate commerce in the course of a commercial activity; or sell or offer for sale in interstate or foreign commerce this species. It will also be illegal to possess, sell, deliver, carry, transport, or ship any specimen of *Gila elegans* which has been illegally taken. Certain exceptions apply to agents of the Service and State conservation agencies. Regulations published in the Federal Register of September 26, 1975 (40 CFR 44412), codified at 50 CFR 17.22 and 17.23, provided for the issuance of permits to carry out otherwise prohibited activities involving Endangered or Threatened species under certain circumstances. Such permits involving Endangered species are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Effect Internationally

In addition to the protection provided by the Act, the Service will review the bonytail chub to determine whether it should be proposed to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for placement upon an appropriate Appendix to that Convention or whether it should be considered under other appropriate international agreements.

National Environmental Policy Act

An environmental assessment has been prepared and is on file in the Service's Washington Office of Endangered Species. It addresses this Action as it involves the bonytail chub. The assessment is the basis for a decision that this determination would not significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969.

Critical Habitat

The Endangered Species Act Amendments of 1978 added the following provision to subsection 4(a)(1) of the Endangered Species Act of 1973:

"At the time any such regulation [to determine a species to be an Endangered or Threatened species] is proposed, the Secretary shall by regulation, to the maximum extent prudent specify any habitat of such species which is then considered to be critical habitat."

The Service has determined that there are no known areas which have the necessary requirements to be determined Critical Habitat, as defined in 50 CFR 402.02, for the bonytail chub. This determination is based on the fact that there are no known habitat sites for breeding, reproduction and rearing of offspring.

The primary author of this rule is Dr. James D. Williams, Office of Endangered Species, 703/235–1975.

Note.—The Department has determined that this is not a significant rule and does not require the preparation of a regulatory analysis under Executive Order 12044 and 43 CFR 14.

The Service now proceeds with this final rulemaking to determine this species as Endangered under the authority contained in the Endangered Species Act of 1973, as amended.

Regulations Promulgation

Accordingly, Part 17 Subparts B and I, Title 50 of the Code of Federal Regulations are amended as set forth below:

§ 17.11 Endangered and threatened wildlife.

1. Section 17.11 is amended by adding, in alphabetical order, the following to the List of Endangered and Threatened Wildlife.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Chub, bonytail	*Gila elegans*	Arizona, California, Colorado, Nevada, Utah, and Wyoming.	Entire	E		NA	NA

Dated: April 18, 1980.

Lynn A. Greenwalt,

Director, Fish and Wildlife Service.

[FR Doc. 80–12416 Filed 4–22–80; 8:45 am]

BILLING CODE 4310–55–M